

TX-2016X8-F10PSG

PRODUCT SPECIFICATION

Features:

- ◆Excellent transiting heat from LED chip operating under RGBC:2.5A AL:2.2A W:2-2.5A.
- ◆High luminous output.
- ◆No UV.
- ◆Encapsulated materials are environmentally certified and meet environmental requirements.

Moisture Proof Grade:

- ◆LEVEL1

Emitting Color:

- ◆Red(R)
- ◆Green (G)
- ◆Blue (B)
- ◆Cyan(C)
- ◆PC Amber (A)
- ◆Lime(L)
- ◆White(W)

Applications:

- ◆Portable Flashlight
- ◆Garden lighting
- ◆General Lighting

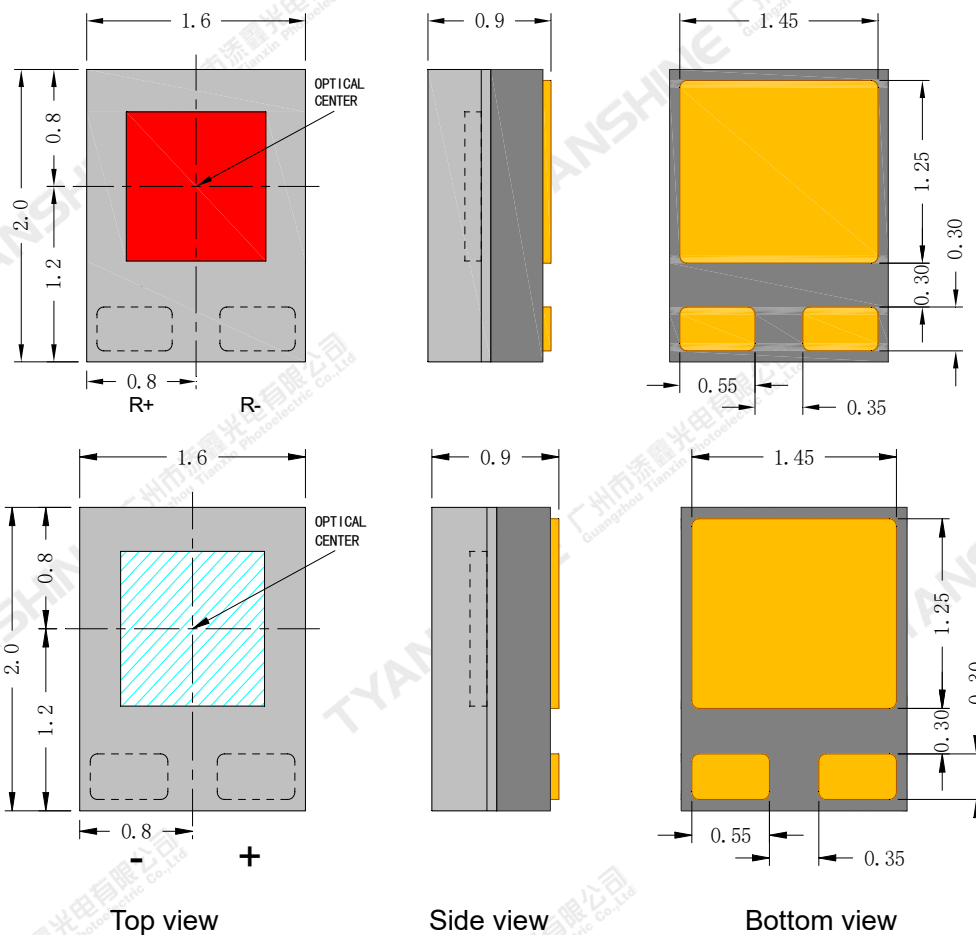
Ordering Information (IF=1A)

TX-2016X8-F10PSG

Product model	λ_d /CCT	Region	Luminous Flux	Ra
TX-2016R8VCA1-NP3CD-01	R _(622.5nm)	620-625nm	108-148	/
TX-2016G8VSA1-NP3CD-01	G _(529nm)	524-534nm	210-280	/
TX-2016B8VSA1-NP3CD-01	B _(453nm)	450-457nm	33-42	/
	B _(467nm)	463-471nm	57-81	/
TX-2016C8VSA1-NP3CD-01	C _(487nm)	482-492nm	120-135	/
TX-2016A8VRA1-NP3CD-01	A _(1800K)	W11、W12	170-205	/
TX-2016L8VRA1-NP3CD-01	L _(4160K)	J5、J6	350-390	/
TX-2016W8VSA1-NP3CD-01H80	W _(3000K)	7D2、7D3	200-290	80-85
	W _(4050K)	5A2、5B4、5D2		
TX-2016W8VSA1-NP3CD-01H90	W _(4900K)	3A3B、3C、4B	185-225	90-95
TX-2016W8VSA1-NP3CD-01H95	W _(2700K)	8A3、8C1	135-175	95-100
	W _(7050K)	0A0D、0D1A、1A1C	180-260	

Package Dimensions:

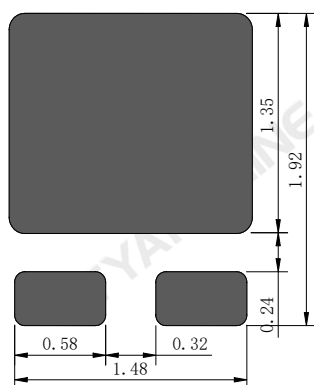
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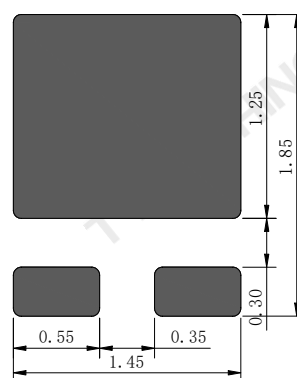
Top view

Side view

Bottom view



Recommended solder pad



Recommended stencil pattern

Notes:

1. All dimensions are in millimeters .
2. Tolerances unless otherwise mentioned are $\pm 0.1\text{mm}$.

Absolute Maximum Ratings (Tc=25℃)

Parameter	Symbol	Ratings	Unit
Forward Current	IF	R	2.5
		G	2.5
		B	2.5
		C	2.5
		A	2.2
		L	2.2
		W _(H95)	2
		W _(H80/H90)	2.5
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	R	6.5
		G	8.75
		B	8.5
		C	8.75
		A	7.48
		L	7.26
		W	6.8-8.5
Junction Temperature	T _j	R	125
		G	150
		B	150
		C	150
		A	150
		L	150
		W	150
Electrostatic Discharge Threshold (ESD)	ESD	ESD sensitive device	V
Storage Temperature	T _{stg}	-40~+70	℃
Operation Temperature	T _{opr}	-30~+85	
Ceramic side temperature(note 4)	T _{cs}	85	

Notes:

- Specifications are subject to change without notice.
- The data on this specification is for reference only and the actual data is in accordance with the acknowledgment.
- Precautions for ESD:
STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.
- Temperature on the side of the LED ceramic substrate.

Electrical Optical Characteristics (Tc=25°C, IF=1000mA)

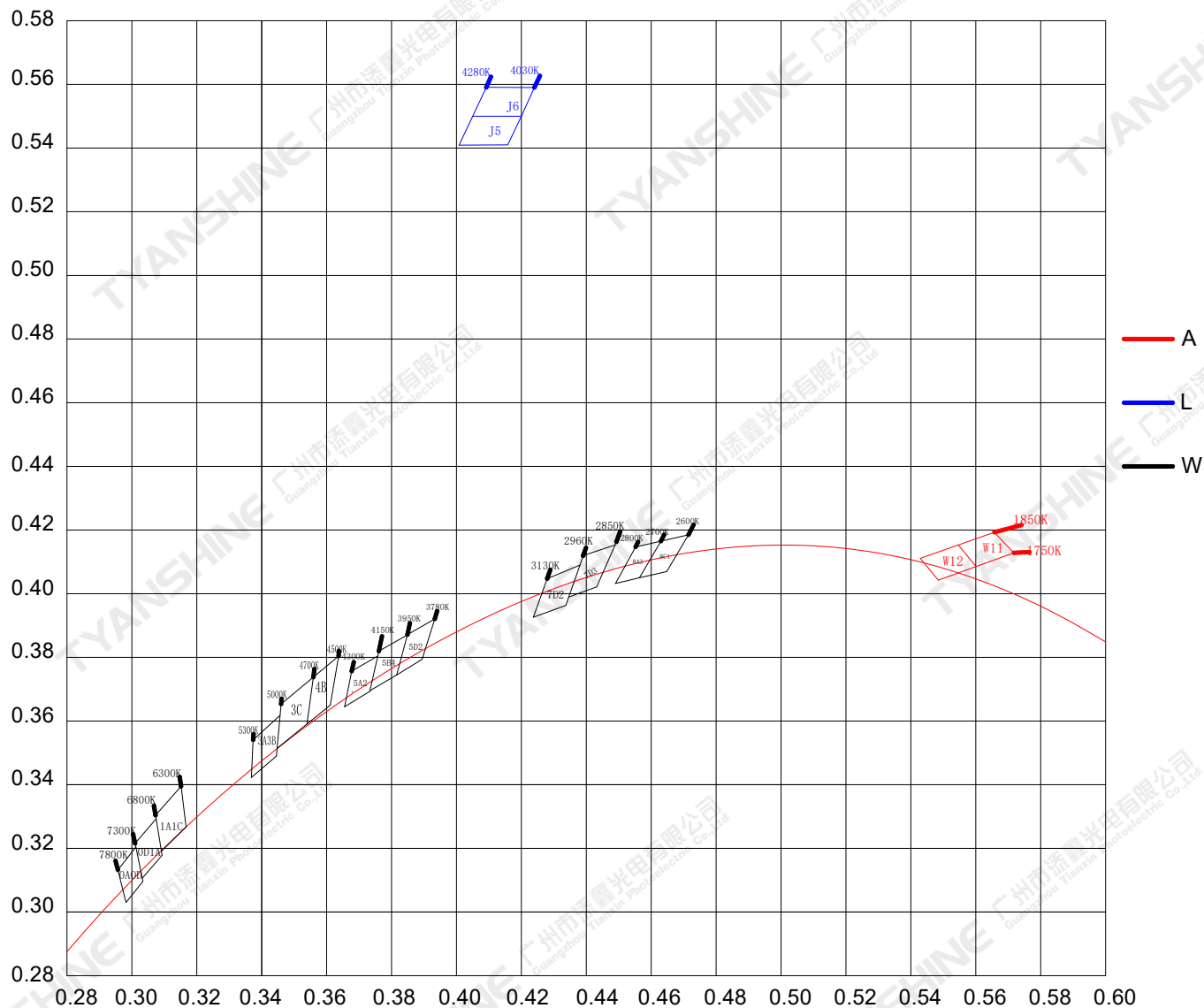
Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Units
Luminous Flux	ϕ_v	R	108	128	148	lm
		G	210	245	280	
		B _(453nm)	33	37	42	
		B _(467nm)	57	69	81	
		C	120	127	135	
		A	170	190	205	
		L	350	370	390	
		W-H80	200	245	290	
		W-H90	185	205	225	
		W _(2700K) -H95	135	155	175	
		W _(7050K) -H95	180	220	260	
Dominant Wavelength	λ_d	R	620	622.5	625	nm
		G	524	529	534	
		B _(453nm)	450	453	457	
		B _(467nm)	463	467	471	
		C	482	487	492	
Correlated Colour Temperature	CCT	A _(1800K)	1750	1800	1850	K
		L _(4160K)	4030	4160	4280	
		W _(3000K)	2850	3000	3130	
		W _(4050K)	3780	4050	4300	
		W _(4900K)	4500	4900	5300	
		W _(2700K)	2600	2700	2800	
		W _(7050K)	6300	7050	7800	
Peak Emission Wavelength	λ_p	R	629	631.5	634	nm
		G	517	522	527	
		B _(453nm)	445	448	452	
		B _(467nm)	448	462	466	
		C	482	487	492	
Forward Voltage	V_f	R	2.0	2.2	2.6	V
		G	2.6	3.0	3.5	
		B	2.9	3.2	3.4	
		C	2.9	3.2	3.5	
		A	2.8	3.0	3.4	

Spectral Line Half-Width	$\Delta\lambda$	L	2.7	3.0	3.3	nm
		W	2.7	3.1	3.4	
		R	13	16	19	
		G	28	33	38	
		B	15	19	23	
		C	22	27	32	
		A	80	85	90	
		L	102	107	112	
		W	19	24	29	
Viewing Angle at 50 % IV	$2\theta_{1/2}$	—	—	120	—	Deg
Reverse Current	I_R	—	—	—	2	μA
Thermal Resistance Junction to Case	$R\theta_{J-C}$	R	—	3.7	—	K/W
		G	—	4.8	—	
		B	—	4.8	—	
		C	—	4.6	—	
		A	—	4.5	—	
		L	—	4.5	—	
		W	—	4.5	—	
Temperature Coefficient of Voltage	$V\Delta F/T$	—	—	-3.3	—	mV/°C

Notes:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. Luminous flux measurement tolerance: $\pm 10\%$.
4. Forward voltage measurement tolerance: $\pm 0.3V$.
5. Ra measurement tolerance: ± 2 .

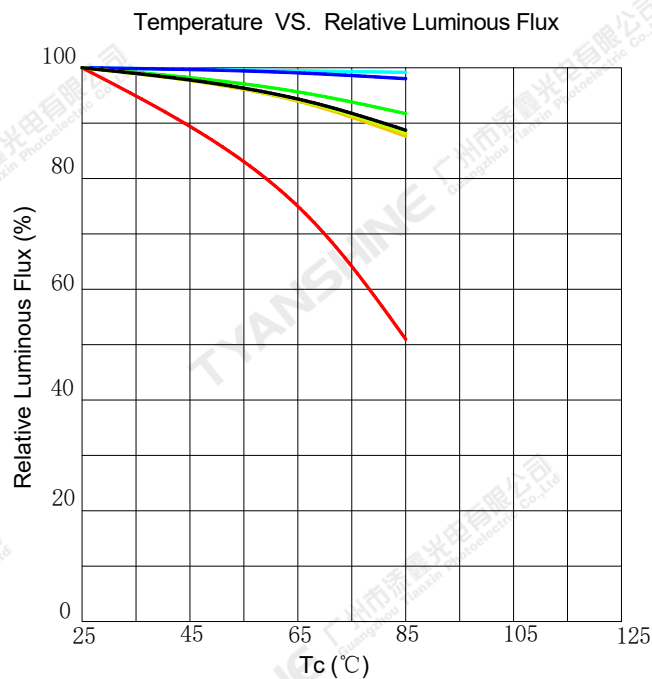
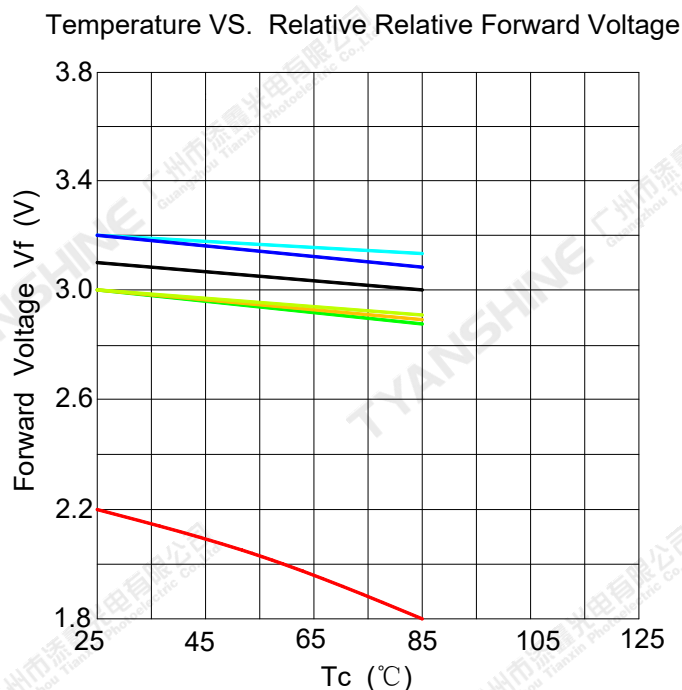
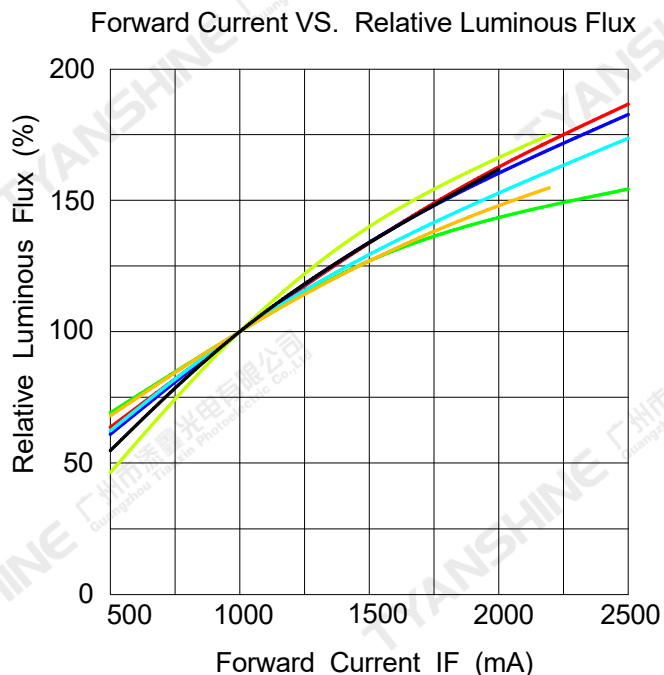
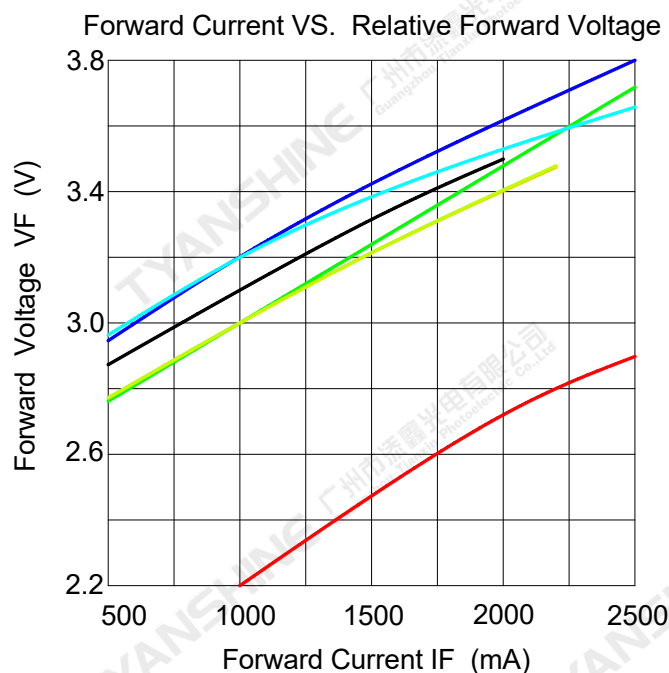
White light Color coordinate filing (IF=1.0A)



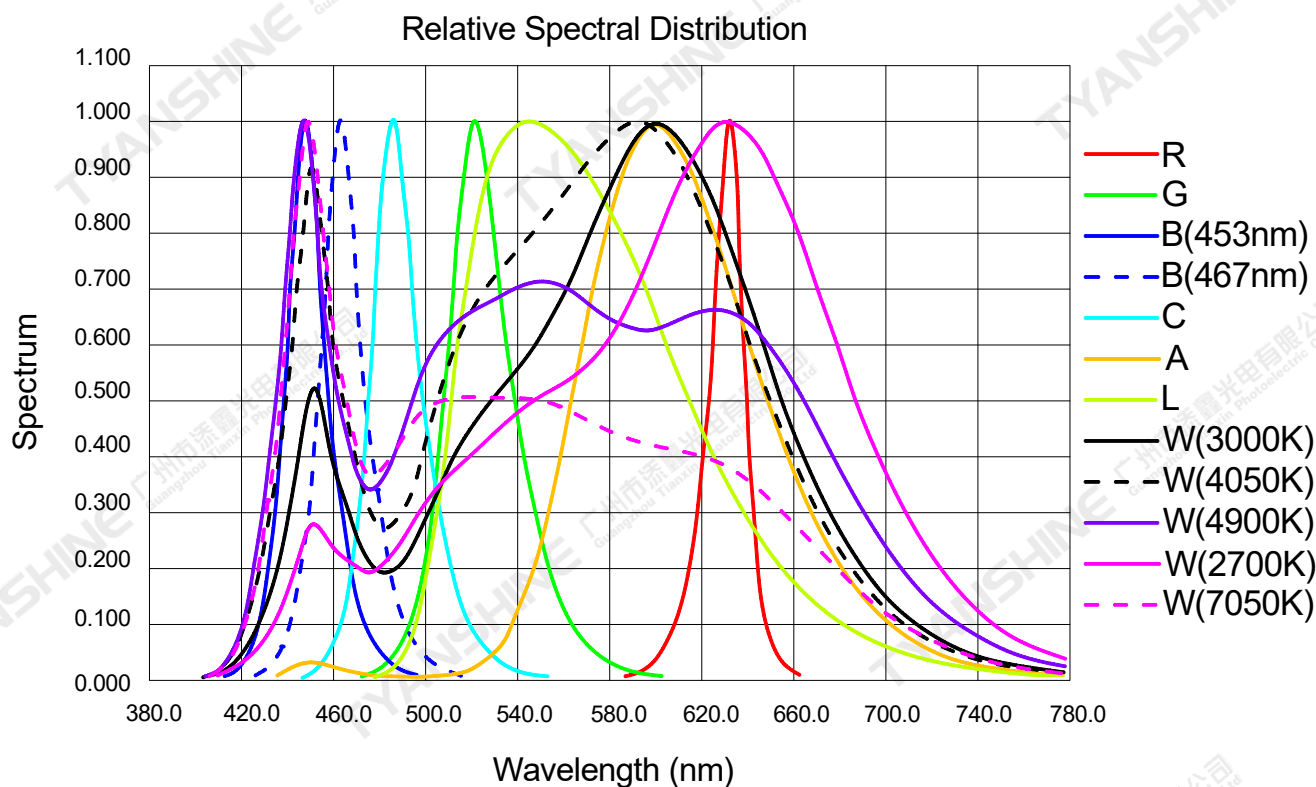
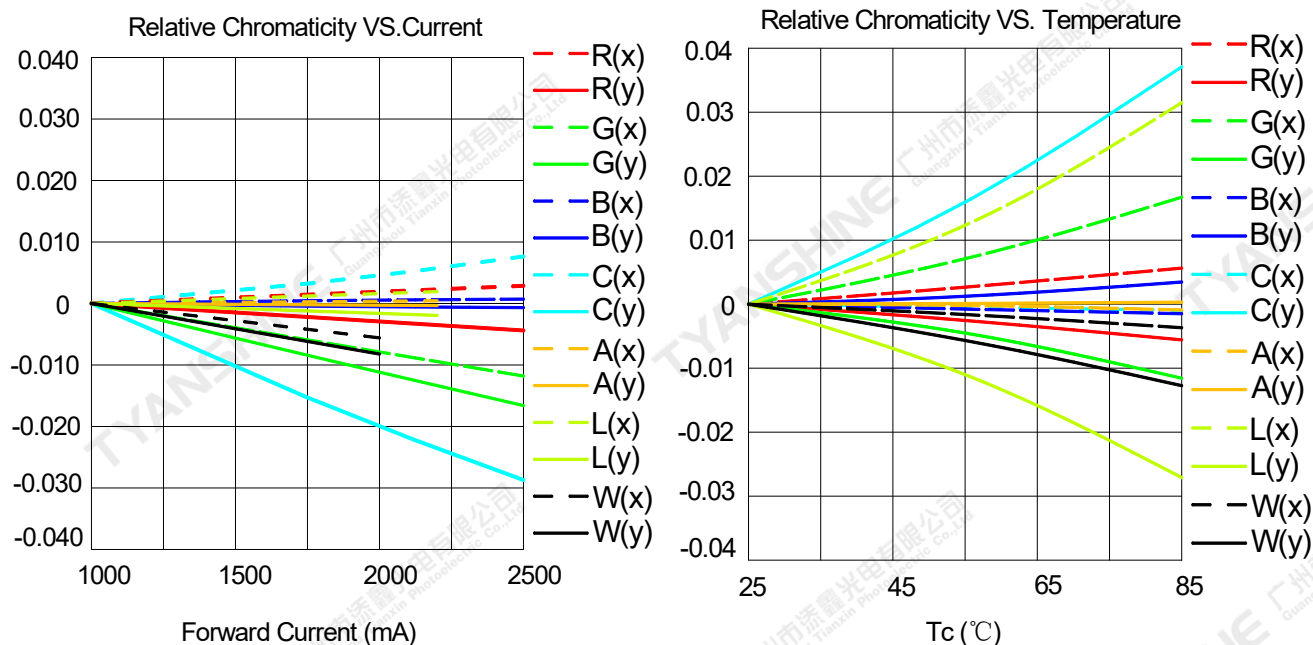
Region	CCT Range		X1	Y1	X2	Y2	X3	Y3	X4	Y4
	Min	Max								
W11	1750K	1850K	0.5718	0.4130	0.5601	0.4087	0.5546	0.4154	0.5658	0.4194
W12			0.5601	0.4087	0.5485	0.4044	0.5429	0.4112	0.5546	0.4154
J5	4030K	4280K	0.4008	0.5409	0.4050	0.5500	0.4200	0.5500	0.4158	0.5410
J6			0.4050	0.5500	0.4092	0.5591	0.4240	0.5590	0.4200	0.5500
7D3	2850K	2960K	0.4346	0.3989	0.4391	0.412	0.4489	0.4153	0.4432	0.4021
7D2	2960K	3130K	0.4237	0.3926	0.428	0.4047	0.4381	0.409	0.4337	0.3963
5D2	3780K	3950K	0.3816	0.3745	0.3849	0.3871	0.3933	0.3921	0.3894	0.3794
5B4	3950K	4150K	0.3733	0.3695	0.3761	0.382	0.3849	0.387	0.3816	0.3745
5A2	4150K	4300K	0.3655	0.3645	0.3677	0.3757	0.3758	0.3804	0.3733	0.3693
4B	4500K	4700K	0.3539	0.3590	0.3559	0.3738	0.3637	0.3804	0.3611	0.3650
3C	4700K	5000K	0.3448	0.3514	0.3460	0.3653	0.3559	0.3738	0.3539	0.3590
3A3B	5000K	5300K	0.3368	0.3423	0.3373	0.3541	0.3457	0.3618	0.3445	0.3490
8C1	2600K	2700K	0.4564	0.4050	0.4630	0.4165	0.4715	0.4185	0.4648	0.4070
8A3	2700K	2800K	0.4490	0.4032	0.4552	0.4147	0.4630	0.4165	0.4564	0.4050
1A1C	6300K	6800K	0.3091	0.3191	0.3073	0.3304	0.3152	0.3395	0.3167	0.3267
0D1A	6800K	7300K	0.3032	0.3106	0.3010	0.3216	0.3075	0.3293	0.3093	0.3178
0A0D	7300K	7800K	0.2982	0.3030	0.2957	0.3132	0.3012	0.3204	0.3034	0.3096

Typical Electrical/Optical Characteristics Curves(IF=1000mA)

(25°C Ambient Temperature Unless Otherwise Noted)



Notes: — Red; — Green; — Blue; — Cyan; — PC Amber; — Lemon; — White



Notes: Red; Green; Blue; Cyan; PC Amber; Lemon; White

Notes:

1. $2\theta_{1/2}$ is the off axis angle from lamp centerline where the luminous intensity is 1/2 of the peak value.
2. View angle tolerance is $\pm 5^{\circ}$.

Usage Precautions

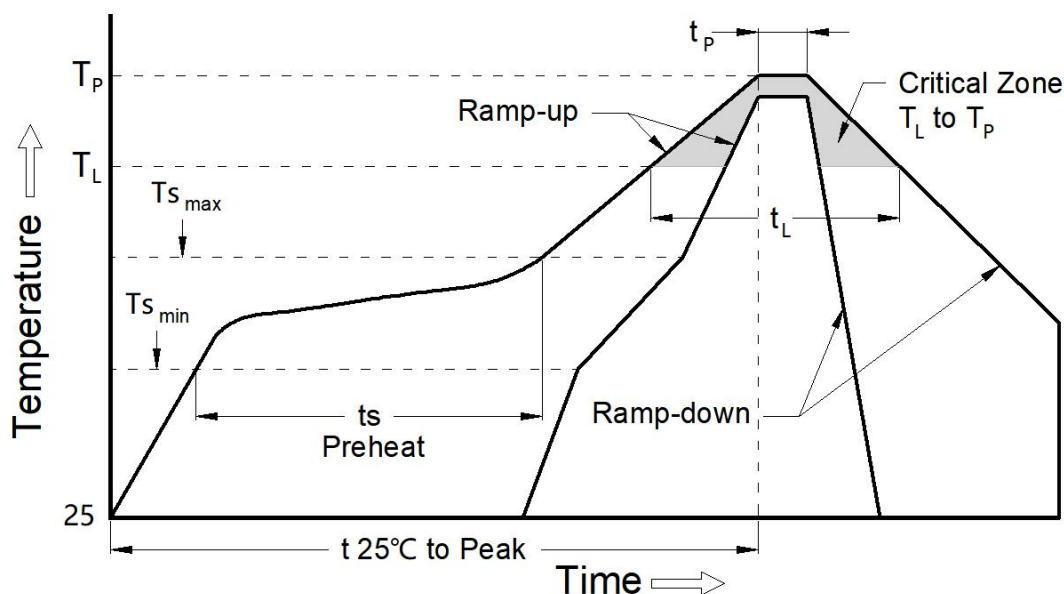
Storage Environment Condition

Temperature: 5°C ~ 30°C

Humidity: 60% RH Max.

Soldering Condition

Use the conditions shown to the under figure.



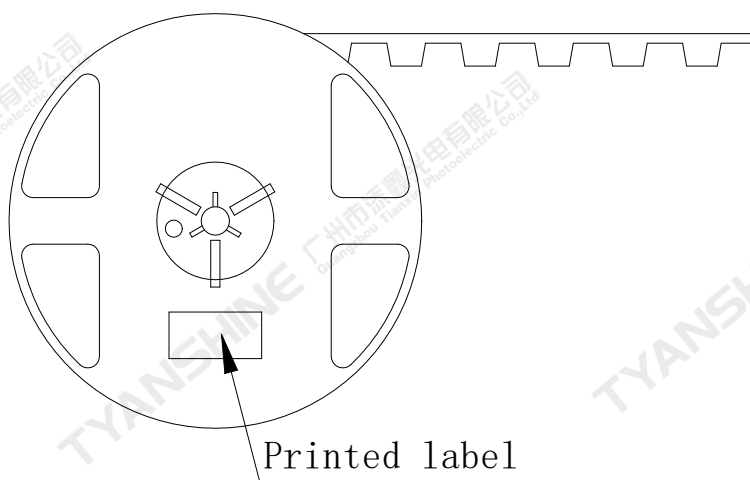
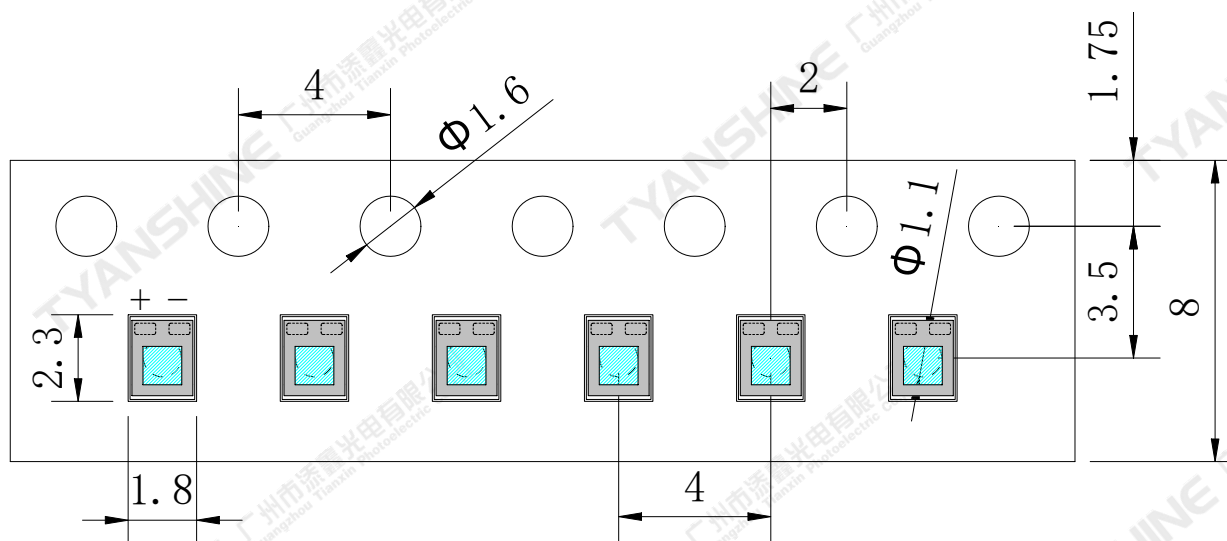
IPC/JEDEC J-STD-020C

Profile Feature	Lead-Free Solder
Average Ramp-Up Rate (T _{S_max} to T _P)	1.2°C/second max.
Preheat: Temperature Min (T _{S_min})	120°C
Preheat: Temperature Max (T _{S_max})	170°C
Preheat: Time (t _{S_min} to t _{S_max})	65-150 seconds
Time Maintained Above: Temperature (T _L)	217°C
Time Maintained Above: Time (t _L)	45-90 seconds
Peak/Classification Temperature (T _P)	235-255°C
Time Within 5°C of Actual Peak Temperature (t _p)	20-40 seconds
Ramp-Down Rate	1-6°C/second
Time 25°C to Peak Temperature	4 minutes max.

Note: All temperatures refer to topside of the package, measured on the package body surface.

Dimensions For Cannulation And Packaging

Quantity: 3000PCS

**Notes:**

1. All dimensions are in millimeters.
2. Tolerances are ± 2.0 mm unless otherwise noted.
3. The products are packaged together with silica gel, Transport, not to the weight of welding LED light-emitting area, As a result of the weight of LED light-emitting zone in the quality of, Irresponsible of the Company.

变更内容描述

生效日期